

DRAGONFLIES
A REVISION OF THE GENUS *ZYGONYX* SELYS

BY

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(With a Text Figure)

The genus *Zygonyx* was created by De Selys in the year 1866, but being too fully occupied at the time with his other work, *Synopsis des Agrionines*, he passed on the characters to his friend and collaborator Dr. Hagen. (*Causeries Odonatologiques*, No. 4.)

Dr. Hagen in the following year published a definition of the genus for the first time (*Hagen, Zool. Bot. Wien.*, 17, p. 62, 1867). Selys had mentioned the names of two species to Hagen but apparently without descriptions, as the latter merely quotes their names—*ida* and *iris*, in his paper. Thus the genus at the date of Hagen's paper was without genotype, as both *ida* and *iris* were *nomen nudum*.

In the following year Brauer republished the Hagenian description, giving *iris* as genotype, but again without descriptions (*Ibid.*, 18, pp. 370, 742 [1868].)

Up to the year 1871, *Zygonyx* was mistaken for a Corduline genus, firstly because of the similarity of the claws to *Macromia* and secondly on account of their Corduline, metallic colouring. Selys corrected this error in his *Synopsis des Cordulines* (p. 81, Sep., 1871), by pointing out that the hindwings were rounded at the base in both sexes, that the tibiae were without keels, and the venation was of a Libelluline type.

Considerable doubt exists as to whether *ida* or *iris* is the correct genotype. Brauer in 1868 had mentioned *iris* as such, but as has already been pointed out, the name was a *nomen nudum*. Selys in 1868-1869 (*Ann. Soc. Ent. Belg.* xii, p. 96) gave *ida* as type, noting at the same time that Brauer had chosen *iris*. In the year 1891, Selys published the descriptions of both species for the first time (*Causeries Odonatologiques*, No. 4) mentioning no genotype, but giving preference of description to *iris*, so that it would appear that he had finally accepted Brauer's ruling. Kirby (*Cat. Odon.*, p. 184 [1890]) gave *iris* as type, and I think that we may accept it as such. *Ida* and *iris* however belong to two different groups, so that, if in the future, they should be placed in different genera, this matter of the correct genotype will assume more importance.

In the last revision of the genus, Dr. Ris lists only three species, suppressing *ceylanica* Kirby, *aenea*, Kirby and *insignis*, Kirby as all synonyms of *iris*. To these three species, I have to add a fourth—*davina*, a beautiful species from Sikkim, and as will be seen in the sequel, with much more material at my command, I have to split up *iris* into a number of well-defined geographical races, or as I prefer to treat them, subspecies.

My species *Z. isis* from Coorg, S. India, turns out to be a *Pseudomacromia*. Dr. Ris with his usual acumen notes that my description tallies closely with that of *P. torrida*, and after having re-examined *isis*, I have to confess that very little separates the two species. *Pseudomacromia* up to now has been considered a purely African genus, but *torrida* has been taken in Palestine apart from its African distribution. Dr. Ris states that the separation of *Zygonyx* and *Pseudomacromia* is an artificial one and dictated by geographical reasons. With the discovery of *isis* in a *Zygonyx* locality these reasons now break down and *Pseudomacromia* becomes merged in *Zygonyx*, the latter automatically becoming one of the largest genera in the subfamily *Libellulinae*. It is to be noted that *isis* and *iris* compare more closely with each other than they do with *ida*, a fact which links the two genera more closely.

Species of the genus not only resemble the *Cordulinae* in their facies but also in habits, which are remarkably like those of *Macromia*. They are sub-montane in distribution and are usually to be found patrolling a short beat on mountain streams. *Isis* agrees with *iris* in this habit, but unlike the latter, frequently indulges in long spells of hovering flight over the brinks of rapids. Both species, after emerging, are gregarious, and soaring to great heights, may

be seen in vast numbers, both sexes mingling without indulging in sexual intercourse, and often in company with *Macromia* and *Azuma*.

They deposit their eggs in the deeper pools occurring in the course of their parent streams, and not even the terrific scouring of the monsoon waters dislodges the larvæ, from their original birth-places. I have seen exuvia clinging to rocks beneath high waterfalls, where a week before, it seemed inconceivable that any living organism could survive the rush and weight of water. This is explained by the shape of the larvæ, the ventral surface being very flat and broad, the dorsum sharply keeled and stream-lined, and rising steeply like the ridge of a tent. Apparently by applying the flattened ventrum to rocks, and possibly contracting the ventral plates, they exert a vacuum, limpet-like suction, which holds them firmly anchored.

They mate over streams, males patrolling ceaselessly, each to its own short beat, awaiting the advent of females. Linking up tandem-fashion, they then set off up-stream, looking and prying into every likely spot wherein to deposit the eggs. This found, the male releases the female, which then proceeds to deposit its ova in bunches on the surface of the stream. Meanwhile the male stands guard over its mate, furiously attacking and driving off any intruders irrespective of size or species.

SYSTEMATIC

Zygonyx iris, Selys.

The Selysian type comes from Panibas, Bengal, a locality which I have been unable to trace on any of the maps which I have consulted. Selys received it from Mr. Atkinson, and it is to be noted that all other specimens of *Odonata* sent by that collector, came from Shillong and Cherrapunji, Assam. Lately Mr. Marton of Edinburgh has received some specimens of *iris* from Shillong, so that it may well be that a mistake was made in the case of the locality of the type.

Dr. Ris discussing this species (*Cat. Coll. Selys, Libellulines*, xiv, pp. 815-823 [1912]) comes to the conclusion that on the evidence afforded by the venation of the wings, and the structure of anal appendages, leg armature and genitalia, he is unable to split it up into forms of any greater rank than varieties. I think however that if a variety of a species is found to be restricted to a particular locality, occurring in great numbers, and to be the sole representative of the species in that district, it may justly claim specific or subspecific rank. It is on this evidence that I venture to split up *iris* into seven subspecies. The form from Borneo is insufficiently described to form any opinion on, but will probably be found to form an eighth subspecies (Laid, *Sar. Mus. Journ.*, ix, — *A Note on Some Bornean Odonata, with Description of a new species.*)

The three subspecies from Ceylon, South India and Tonkin respectively, are all conspicuous from their large size. The Ceylon, Upper Burma and Tonkin forms are distinguished by the total absence of the conspicuous sexual distinction mark on the dorsum of segment 7. I have been able to examine a large number of specimens of the Ceylon form *ceylanica*, Kirby, which is the sole representative of *iris* in Ceylon. All agree in their great size, extreme melanism, and unmarked abdomen. I have seen and collected great numbers, probably running into hundreds, of the form *malabarica* from South India, which is again the sole representative of *iris* in that district, and find that the markings in all, never vary in shape or extent and that in all, there is a conspicuous abdominal marking on segment 7. Here then we have an insular and a continental form separated by a narrow strip of sea, each with its own well-marked characters, never varying and never intermingling. Turning our attention to the north of India, we find an exact parallel in the case of *iris* from Bengal, and *isa* and *miltredæ* from Upper Burma, where the former has conspicuous abdominal markings, the two latter with unmarked abdomen. All three forms are smaller than the two southern. I need not labour the point further.

Zygonyx iris iris, Selys.

Male. Abdomen, 36 mm. Hindwing 43 mm.

Head. Labium bright citron yellow, the midlobe black, as also the borders of the lateral narrowly; labrum blackish brown, anteclypeus yellowish brown, postclypeus yellow, frons and vesicle bronzed or metallic blue; occiput yellow, Prothorax, brown

Thorax dark metallic green marked with bright citron yellow as follows :—The middorsal carina narrowly, a moderately broad humeral stripe, a very broad midlateral stripe and the hinder half or more of the metepimeron.

Wings hyaline but enfumed throughout, especially at the apices, which are stippled with brown ; pterostigma black ; nodal index $\frac{9-17\frac{1}{2}}{12-11} \frac{16\frac{1}{2}-9}{12-11}$; trigones

traversed, occasionally twice, inner costal angle of that of forewing about a right angle ; subtrigones in forewings 3-celled, 1 or 2 cubital nervures in forewings ; only a single row of cells between *R*s and *Rspl*.

Abdomen black marked with yellow as follows :—Segment 1 very broadly on the sides, this area bearing a medial cuneiform spot of black, segment 2 with the middorsal carina rather broadly yellow, and the sides, on the lower part of which is a largish irregular spot of black, segment 3 similar to 2, but no lateral black spot, the yellow here tapering away apicad, segments 4 to 7 with the middorsal carina finely yellow, broadening on 7 to form an elongate spot which is narrow at the extreme base, broadens rapidly and then tapers to a fine point as far as the apical border of segment ; segment 8 with a minute spot situated laterally and near the base, remainder of abdomen unmarked.

Anal appendages black, inferior triangular, considerably shorter than the superiors, curled slightly up at the apex ; superiors cylindrical, a little dilated subapically and then tapering to a fine point, a large robust ventral spine situated close to apex, no ventral spines at base.

Genitalia marked broadly with black and yellow stripes. Lamina projecting prominently and perpendicularly to the long axis of abdomen, tapering to a blunt point ; hamules with short stout curled black hooks directed back and converging on each other, base tumid ; lobe very narrow, subacute, prolonged.

Legs black, anterior femora yellow within ; hind femora armed with a row of closely-set, minute but robust spines, with 3 to 4 longer ones at the distal end of limb ; claw-hooks as long as apex of claw, so that the latter appear as if bifid.

Distribution. Confined to North Bengal and Assam, in submontane areas. Type in the Selysian collection from Bengal. Several males from Shillong, Assam, August 2, 1925, in Mr. Morton's collection, one of which he has been kind enough to give me. *Z. iris* resembles *malabarica* by possessing a conspicuous identification mark on segment 7, but in *iris* the marking is smaller and differently shaped ; on the contrary other markings are more extensive than in *malabarica*.

Female unknown.

Zygonyx iris malabarica, sub-sp. nov.

Male. Abdomen, 41 mm. Hindwing, 46 mm.

Head. Labium bright gamboge yellow, the midlobe and borders of latera lobes narrowly black ; labrum glossy black ; anteclypeus citron yellow, postclypeus glossy black at the centre and along lower margins, bright citron yellow laterally, this colour extending upwards along both sides of frons and meeting as a narrow line along its lower border. Frons and vesicle dark metallic violet ; occiput black.

Prothorax blackish brown.

Thorax dark metallic bluish green (prussian blue) marked with yellow as follows :—A moderately broad humeral stripe bright citron yellow in its lowest part, where it forms a conspicuous rounded spot, clouded and almost obscured with dark brown above ; laterally a narrow irregular bright citron yellow stripe situated medially, and rather less than the hinder half of the metepimeron the same colour. Tergum spotted broadly with yellow.

Legs black, anterior femora bright citron yellow within, hind femora armed with a row of very closely-set, small, robust spines.

Wings hyaline, uncoloured, longer and narrower than in the genotype. Pterostigma black, equal in all wings, over $2-2\frac{1}{2}$ cells ; 3 rows of discoidal cells in forewings ; trigones all traversed once, inner costal angle of trigone in forewing obtuse ; a single row of cells between *R*s and *Rspl*, with occasional

double cells ; nodal index $\frac{8-15\frac{1}{2}}{9-10} \frac{15\frac{1}{2}-9}{11-9}$; 2 cubital nervures in forewing, only 1

in the hind ; membrane brown,

Abdomen black marked with citron yellow as follows :—Segment 1 pale brown changing to black on dorsum, 2 with a broad lateral stripe almost connected across the dorsum by a fine line at the jugal suture, a narrow basal triangular spot on dorsum, segment 3 with the dorsal carina finely yellow, broadening slightly at base, a broad lateral stripe tapering apicad and continuous with that on the second segment, segment 4 with a baso-lateral spot confluent with a fine basal ring, which latter is confluent with a fine line on the dorsal carina, this gradually lost as traced apicad ; segments 5 and 6 with fine basal rings, that on 5 confluent with a fine line on the basal half of the dorsal carina, 6 has also a small middorsal isolated spot, segment 7 with a broad conspicuous dorsal marking on its basal two-thirds, abruptly and squarely constricted at its extreme base and broadening slightly towards the apex of segment. At the base of segment a fine annule confluent with a narrow ventrolateral obscure stripe which extends for half the segment. Segments 8 to 10 unmarked.

Anal appendages black, inferior hardly shorter than the superiors, triangular, curling slightly up at apex ; superiors longer than in *iris iris*, the ventral spine more obtuse, smaller and situated further from the apex of appendage, finally 3 to 4 spines on under surface of base of appendages.

Genitalia. Lamina projecting perpendicularly to plane of abdomen, tapering to a blunt point, very prominent in profile ; hamules stout and broad at base, hooks short, directed back and in, striped with yellow, hooks glossy black ; lobe long and narrow, rounded at apex and coated with long golden hairs.

Female. Abdomen 40 mm. Hindwing 47 mm.

Very similar to the male, but larger and more robust, its markings similar but the humeral stripe citron yellow throughout ; segment 2 with the middorsal carina conspicuously but narrowly yellow and forming a cross with the fine yellow line bordering on the jugal suture. Segment 6 without the middorsal spot.

Wings hyaline ; nodal index $9-14\frac{1}{2}|15\frac{1}{2}-8$; 2 rows of cells between *R*s and $11-10|11-10$

*R*₅*pl* especially in the hindwings ; 2 to 3 cubital nervures in forewing, 1 in the hind.

Anal appendages small, conical, pointed, black. Vulvar scale inconspicuous (hidden from view in practically all specimens examined, by a mass of extruded eggs).

Distribution. Restricted to Southern India. Western Ghats below Bombay, Palni and Shevaroy Hills and lower hills bordering the Madras District near Chingleput. Extremely common in Coorg where a hundred or more may be seen at one time flying together in the air, often 300 to 400 ft. above river level. Differs from other species except *ceylanica*, by its large size and robust build, and by its restricted thoracic markings. It differs from all species except *iris iris*, by the large dorsal marking on segment 7, this marking broadening apicad in *malabarica*, tapering apicad in *iris*. Other smaller details in addition, also separate it from North Indian species. These differences are easily appreciated when the species is confronted with others.

Larva strikingly like that of an *Ictinus*, ashy grey to black in colour, the legs banded with black.

Head rather broad, eyes hemispherical, projecting markedly. Wing cases divergent, broad, extending analward as far as the level of the apex of segment 5.

Mask short and broad, of the usual Libelluline shape, extending back as far as the level of the first pair of legs. No teeth or dentations along the contiguous borders of the lateral lobes or opposing border of the midlobe, these borders fringed with very closely-set, short stiff bristles. Moveable hook short. Six to seven setæ along outer border of lateral lobes, a row of 7 to 8 setæ on body of lobe near joints of lateral lobes and two converging rows of 10 to 12 in each row, near centre of body of mask. Midlobe produced in a slightly blunt triangle at the middle.

Abdomen very broad and high, triangular in section, the sides sloping steeply upward to a prominent dorsal keel, which bears a series of long robust backwardly directed spines, one on each segment, rather long and angulate near the thorax, obtuse, more robust, and less angulated back near the anal segments. The last two segments with a long fine spine on each

side, that on the last being twice the length of that on the penultimate segment.

Legs long and spidery, hind femora extending back to apex of segment 6, almost naked.

These larvæ equal in size that of *Ictinus apax*, and being very similar in general appearance, are apt to be mistaken for it.

***Zygonyx iris ænea*. (Kirby.)**

(= *Ænea* and *insignis*, Kirby.)

I have re-examined Kirby's types in the British Museum. There are two males of *insignis* and a single pair of *ænea*, all males agreeing in thoracic and head markings, all without abdomen marked, and all of large size similar to the Ceylon and South India forms. The two forms, one from Hainan, and the other from Tonkin, are obviously of the same subspecies. The males are without the yellow humeral stripe, although faintly indicated by a brownish mark below. All four specimens are distinguished by having the apices of wings enfumed with brown as far as the outer end of pterostigma, and also by a dark brown basal marking to the hindwings, about 1 to 2 rows of cells deep, and extending half-way to the tornus.

The female, which may or may not belong to these males, has the abdomen marked somewhat as in *davina*, but in addition has on segment 7 a long narrow oval yellow spot extending from base to apex. The dorsal carina is finely yellow as far as segment 7. Whilst the males have the thoracic markings obscured more than in *ceylanica*, the female has them as broad and distinct as in *davina*.

***Zygonyx iris ceylanica*, Kirby**

Male. Abdomen, 37 mm. Hindwing, 50 mm.

Female. Abdomen, 45 mm. Hindwing, 53-55 mm.

This species described by Kirby in 1905 (*Ann. Mag. Nat. Hist.* (7) v, p. 533) is given as synonymous with *iris* by Dr. Ris in *Cat. Coll. Selys, Libellulines*, 1911, it is however quite distinct and much more nearly related to *malabarica* than to *iris*. Its size is even larger and its markings even more restricted than in *malabarica* from which it has in all probability been derived. I note the following differences:—Size distinctly larger on an average, black bordering of lateral lobes very broad, only the basal part of these lobes yellow, anteclypeus and postclypeus and portion of frons above it entirely black, the extreme sides only of the postclypeus yellow, humeral stripe absent, only a small rounded yellow spot below, lateral stripes of thorax almost obscured by dark brown, only the hinder margin of metepimeron narrowly yellow. Anterior femora black within. Inner costal angle of trigone of forewing more obtuse than in any other species. Abdominal markings absent except for an obscure lateral stripe on segments 2 and 3. Anal appendages as for *malabarica* but the ventral spines more numerous and 2 or 3 small spines found on the apical ventral spine.

Distribution. Restricted to Ceylon, to submontane areas. Several males collected by Col. F. Wall, 13, ix. 24, Kandy, Ceylon. One pair from Haragama, Ceylon, 15, vii. 10. Laidlaw gives the dimensions of the female, this sex otherwise has not been described, but probably closely resembles the male. Type in the B.M.

***Zygonyx iris mildredæ*, sub-sp. nov.**

Male. Abdomen, 36 mm. Hindwing, 41 mm.

Head. Labium bright citron yellow, the midlobe and borders of lateral lobes very finely black; labrum glossy black; epistome and face bright greenish yellow, clouded centrally with brown, especially along the lower border of the postclypeus; frons and vesicle dark metallic violet; occiput blackish brown; eyes dark reddish brown. Prothorax brown.

Thorax dark metallic green marked with bright citron yellow, the middorsal carina finely, a narrow humeral stripe which is clouded with brown above, a broad lateral medial stripe and the hinder half of the metepimeron.

Wings hyaline; pterostigma black, that of hindwing distinctly smaller than the fore; nodal index $\frac{9-16\frac{1}{2}}{11-10} | \frac{16\frac{1}{2}-9}{11-10}$; 2 rows of discoidal cells in all wings; trigones traversed once, inner costal angle of trigone of forewing obtuse; 2 cubital nervures in forewings.

Legs black, anterior pair of femora brownish. Hind femora armed with a row of very small, very closely-set spines and 4 or 5 longer distal ones.

Abdomen black, a trace of yellow on the middorsal carina of segments 1 and 2, and the carina very finely yellow on segments 5 to 7. Laterally the sides of segments 1 and 2 yellow along the ventral border.

Anal appendages and genitalia shaped very similar to those of *Z. iris*.

Female. Abdomen 40 mm. Hindwing, 46 mm.

Very similar to the male but the markings more extensive, and the body more robust, the abdomen stouter.

Epistome and face uniform bright citron yellow; frons dark metallic green, vesicle dark metallic blue.

Thorax similar to the male but the yellow brighter, the humeral stripe better defined.

Abdomen black marked more extensively than in the male. The dorsal carina rather broadly yellow on segments 1 and 2, finely so thereafter as far as the apical border of segment 7. The sides of segments 1 to 3 rather broadly yellow, tapering away on the sides of 3.

Anal appendages short black conical. Vulvar scale scoop-shaped, with straight hinder border, not prominent in profile.

Wings hyaline but palely washed with yellow from the level of trigones to the apices; all trigones traversed once; nodal index $\frac{10-16\frac{1}{2}}{11-10} | \frac{16\frac{1}{2}-10}{10-10}$.

Distribution. Maymyo, N. Shan States, Upper Burma. Five males and a single female collected by Col. F. Wall, after whose wife this fine new species is named. It is distinguished from *Z. isa* by the 3 rows of discoidal cells in the forewings (only 2 rows in *isa*), as well as by the facial and abdominal markings. The two last features also serve to separate it from *Z. iris* and *ceylanica*, whilst venational characters easily distinguish it from *Z. ida* and *ilia*. The absence of basal wing markings separate the female from *Z. davina* which it rather closely resembles in other respects. The clear apices of all wings distinguish it from *ænea* from Tonkin.

Zygonyi iris isa, sub-sp. nov.

Male. Abdomen 37 mm. Hindwing 44 mm.

Head. Labium dark brown with a very large citron yellow spot on each lateral lobe; labrum and epistome glossy black, a broad lateral yellow fascia on each side of face extending downwards from front, the latter and vesicle a beautiful metallic violet; occiput brown; eyes dark reddish brown. Prothorax brown.

Thorax metallic green on dorsum as far out as the humeral suture, which latter lies in a stripe of dull brown. Laterally two broad bands of green metallic separated by an equally broad belt of dull brown. Hinder border of metepimeron dull pale brown.

Legs black, the anterior pair of femora reddish brown, armed with 3 long spines at their distal ends.

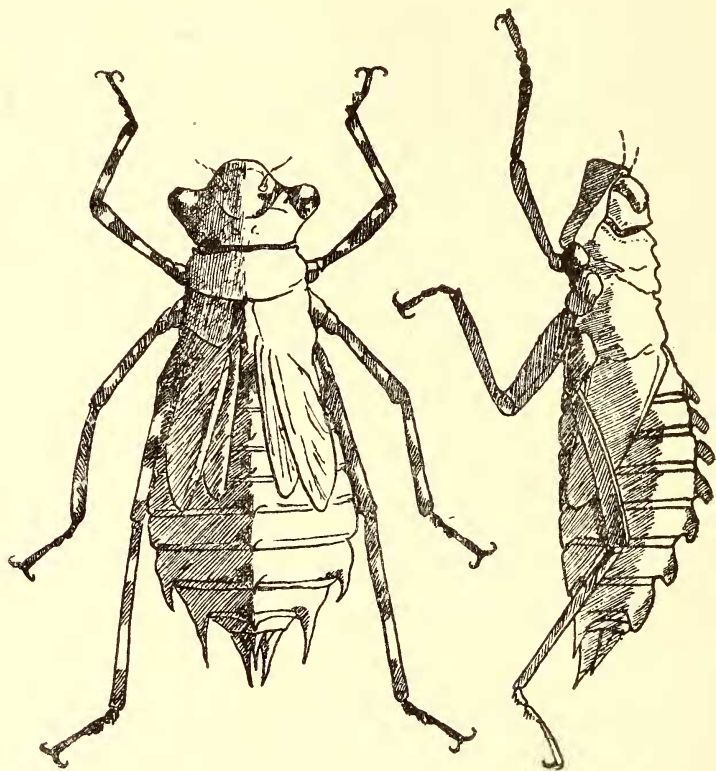
Wings hyaline; pterostigma black, 3.5 mm. long in the forewing, 3.0 mm. in the hind; membrane dark brown, the wing enfumed on its outer border; 2 cubital nervures in forewing, 1 in the hind; trigone of forewings traversed once, narrow, the costal side slightly longer than half the inner side; trigone of hindwings traversed once; 2 rows of cells between *Rs* and *Rspl*; nodal index $\frac{9-14\frac{1}{2}}{9-10} | \frac{14\frac{1}{2}-8}{9-9}$; only 2 rows of discoidal cells in forewings.

Abdomen black with dark green metallic reflex, the sides of segments 1 and 2 yellow, the dorsal carina and the base of segment 2 finely yellow. The rest of abdomen black, unmarked.

Anal appendages black, similar to those of *Z. iris*. Some minute spines beneath the superiors near the base and again near apex.

Genitalia not differing markedly from *Z. iris*.

Distribution. Maymyo, N. Shan States, Upper Burma, collected by Col. F. Wall, I.M.S., June 19, 1924. The species closely resembles *ceylanica* in its absence of markings, but is distinguished from it by the broader markings on labium and thorax, and by the slightly broader and less inclined trigones of forewings, by its smaller size and more especially by the discoidal field of forewings formed of only 2 rows of cells instead of 3 (three rows in all other sub-species).



Larva of *Zygonyx iris malabarica*, Fras.

Zygonyx iris davina, sp. nov.

Female. Abdomen, 44 mm. Hindwing, 50 mm.

Head. Labium bright gamboge yellow, the midlobe and borders of lateral lobes narrowly black, labrum glossy black; anteclypeus pale brown, postclypeus citron yellow, this colour extending up along sides of frons, the medial part glossy black; frons and vesicle metallic green; occiput black.

Prothorax matt black, posterior lobe small.

Thorax dark metallic green marked with citron yellow as follows:—The mid-dorsal carina narrowly, its upper part extending out as a narrow bar; narrow humeral stripes slightly constricted above, and limited behind by the humeral suture, a broad lateral stripe extending between the two sutures, finally the hinder half of the metepimeron.

Legs black, anterior femora bright yellow within, armature of hind femora as for genus.

Wings hyaline, the apices enfumed brown in the forewing as far as a little proximal of middle of pterostigma, in the hind as far as distal end of pterostigma, pterostigma black, sub-sequal in fore and hind-wings, over about 2 cells. Bases of all wings marked broadly with brilliant golden amber, in forewings as far as level of arc in the sub costal space, a little more distal behind

Cuii, and deepening in colour proximad ; in the hindwing as far as a little beyond the level of outer end of trigone in subcostal space, to outer end of trigone at level of that structure, and from thence in a curve towards the tornus. Discoidal field begins with 3 rows of cells for a distance of 5 cells and is then continued for a few cells as 2 rows ; trigone with inner costal angle about a right angle in the forewing, traversed once in all wings ; subtrigones 3 to 4 celled ; 2 cubital cells in forewings, 1 in the hind ; nodal index $\frac{11-17\frac{1}{2}}{15-12} | \frac{16\frac{1}{2}-12}{15-14}$.

Abdomen black marked broadly with yellow as follows :—Segment 1 laterally, 2 almost entirely yellow, a narrow black subdorsal stripe broken broadly at the jugal suture and confluent with a narrow apical black ring, three similar to two but the black a little more extensive and coalescing over the dorsum at the apex of segment, four and five with the dorsal carina finely yellow, segment 4 has also a narrow stripe along the ventral border and a minute basal lateral spot. Rest of abdomen black.

Anal appendages black, small, conical. Vulvar scale inconspicuous, hinder border straight, not prolonged. (A cluster of eggs is found on this specimen, the individual eggs being oval in shape and pale yellow.)

Distribution. Pashok, Darjeeling District. A single female of this magnificent insect, collected by Mr. Chas M. Inglis at an altitude of 3,500 ft. May 24, 1925. It is distinguished at once from all other species by the broad coloured fascia at the bases of all wings, a marking which in colour and extent recalls that of *Anotogaster basalis* from the same district. Male unknown. It is to be hoped that more specimens and the male of this fine insect will fall to the net of Mr. Inglis.

Zygonyx illa, Ris.

This species, like the following, belongs to an entirely different group and is distinguished by having the costal and proximal sides of the trigone in forewings nearly equal in length, and by the trigones of both wings entire. There is moreover only a single cubital nervure in the forewings (2 in all other species).

Zygonyx ida, Selys.

A small species from Java is distinguished by having only two rows of discoidal cells in the forewings, the trigones of forewings free (at least in the male, variably free or traversed in the female). The trigone of forewings is also much wider and shorter than in *iris*. The female has the apices of forewings pale reddish brown and the bases broadly golden yellow as far out as the middle of trigone, though not as deeply coloured as in *davina*. The body colouring, in both sexes, is coppery, marked broadly with yellow.

Zygonyx torrida isis, Fras.

As already stated above, this Coorg form cannot be considered more than a subspecies of *torrida*, the only species of *Pseudomacromia* with which I am at all acquainted